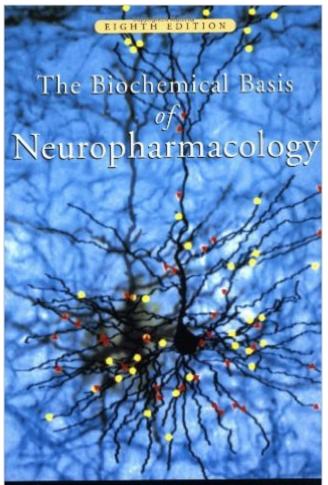
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# The Biochemical Basis Of Neuropharmacology



JACK R. COOPER V FLOYD'E! BEOOM V ROBERT H. ROTH



## Synopsis

This classic text gives a uniquely lucid and lively view of neurotransmitters, their role in nervous system function, and their involvement in the mechanisms of psychiatric drug action. For three decades it has served as an essential guide for students of neuroscience and psychopharmacology, residents in psychiatry and neurology, and clinicians and scientists. Both authoriative and very readable, it has been thoroughly updated for each edition. In the 8th Edition more space is devoted to clinical examples, subclasses of receptors that provide targets for new drugs, molecular genetics, the major problem of drug delivery to the brain, and the growing recognition of nicotin receptors in the brain and their possible involvement in Alxheimer's and Parkinson's diseases. In addition, the book's format has been enlarged and a second color added to many of the illustrations.

## **Book Information**

Paperback: 416 pages Publisher: Oxford University Press; 8 edition (October 17, 2002) Language: English ISBN-10: 0195140087 ISBN-13: 978-0195140088 Product Dimensions: 9.1 x 0.7 x 6 inches Shipping Weight: 1.5 pounds Average Customer Review: 4.2 out of 5 stars Â See all reviews (8 customer reviews) Best Sellers Rank: #509,404 in Books (See Top 100 in Books) #120 in Books > Textbooks > Medicine & Health Sciences > Medicine > Basic Sciences > Biochemistry #126 in Books > Medical Books > Psychology > Psychopharmacology #140 in Books > Health, Fitness & Dieting > Psychology & Counseling > Psychopharmacology

### **Customer Reviews**

This book is an excellent introductory text, suitable for undergraduates or "outsiders", outlining the basic principles of neuropharmacology. Reviews of the major concepts involved in neurotransmission are included in the first half of the book, such as cellular and molecular (read DNA) biological basics as well as descriptions of amino acid based neurotransmission. The second half of the book is organized with each chapter devoted to a single molecule. My major criticism is that although the title is "The BIOCHEMICAL Basis of Neuropharmacology", the chemistry in the text is rather simple and incomplete, and the lack of quantitative discussion of pharmacokinetics is a major disappointment. All beginning students of neuropharmacology should purchase this book - in

#### paperback it is truly a bargain. END

This reference is easy to read. As well, unlike most pharmacology texts, this one does not concentrate on drugs, but rather on the underlying physiology. There is an introduction to neurons, synapses and action potentials. There is an introduction to modern molecular methods. It is interesting to note that in describing molecular cloning methods, the work of J. G. Sutcliffe, R.J. Milner, and F.E. Bloom is reported whereby a cDNA library was prepared from mRNAs from whole rat brain, then it was seen what individual cDNAs hybridized with the mRNAs from rat liver and kidney. Approximately 30,000 of the brain's 50,000 mRNAs were not detected in the liver or kidney, showing that much of the rat's DNA is for neuronal purposes. In the introduction to receptors, it is noted that there about a thousand known receptors to neurotransmitters, hormones and odorants. The introduction to neuromodulators includes the neuronal effects of nitric oxide (thought to be involved in both long-term potentiation LTP and long-term depression LTD; nitric oxide synthase inhibitors will block NMDA receptor activation). The chapter on amino acid neurotransmitters includes excitatory glutamate and aspartate, and inhibitory GABA, glycine, alanine, cystathionine and serine. There are chapters on cholinergic (acetylcholine) and catecholaminergic (norepinephrine, epinephrine and dopamine) neurotransmitters. Serotonin and histamine neurotransmitters are considered in detail in the next chapter. There is an introduction to neuroactive peptides, noting that they must be synthesized on ribosomes, then at the smooth endoplasmic reticulum they are put into vesicles in a prohormonal form, and only then transported to the nerve terminals. The book concludes with introductions to the cellular mechanisms involved in learning, and the involvement of neurotransmitters in neurological and psychiatric illnesses.

This classic text has been replaced by 'Intro to Neuropsychopharmacology', by 2 of the same authors, also published by Oxford University Press (Iverson, Iverson, Cooper, Bloom; Nov. 2008).

This edition works for someone who wants to learn the basics of Neuropharmacology, which I bought it for. However, there are several more complex drugs which appeared in the market in the past two decades and I would like to know what are the biochemical interaction subtleties and differences of these new drugs compared the basic processes.Overall, I learned a lot and the book assisted me in my understanding of the subject I am currently studying.

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